WHAT IS CLAIMED IS

1. An adjustable-length compression spring, comprising

- a casing (1), which is filled with a free-flowing pressure fluid and has a central longitudinal axis (7);
- a guide and seal unit (6), which closes a first end (5) of the casing (1);
- a piston rod (8), which has an outer end (9) and is sealingly extended through the guide and seal unit (6) out of the first end (5) of the casing (1);
- a piston (12), which is connected to the piston rod (8) and sealingly guided in the casing (1);
- a pressure-fluid-filled first sectional casing chamber (15), which is unilaterally defined by the piston (12);
- an energy accumulator (19; 46; 64) for exercising pressure on the pressure fluid;
- a pressure-fluid-filled second sectional casing chamber (16), which is connectable to the first sectional casing chamber (15); and
- a controllable valve (20; 50) for interconnection of the sectional casing chambers (15, 16) by an actuation/overflow assembly (37), the valve (20; 50) having a valve pin (24), which is movable from outside the casing (1) into an open position of the controllable valve (20; 50) and into a shut-off position;

wherein an automatic valve (41) for interconnection of the sectional casing chambers (15, 16) by an automatic overflow connection (44), the automatic valve (41) comprising a valve element (41a), which is pre-loaded in a shut-off position such that, in the valve-pin-(24) shut-off position of the controllable valve (20; 50), opening the automatic valve (41) into an open position takes place only when an overcoming force F_1 works between the piston rod (8) and the casing (1) in a piston-rod push-out direction (36a), with

$$-2F_2 < F_1 < 2F_2$$

applying to a relationship between the overcoming force F_1 and a push-out force F_2 which, by the pressure of the pressure fluid, works between the piston rod (8) and the casing (1) in the sectional casing chambers (15, 16) in a piston-rod push-out direction (36a) in the open position of the valve pin (24) of the controllable valve (20; 50).

2. A compression spring according to claim 1, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $0 < F_1 < F_2$.

3. A compression spring according to claim 1, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $-F_2 < F_1 < 0$.

4. A compression spring according to claim 1, wherein the valve element (41a) of the automatic valve (41) is a composite body with a substrate layer (42) that is at least unilaterally coated with a non-metal layer (43).

5. A compression spring according to claim 4, wherein the substrate layer (42) of the valve element (41a) is made of metal.

6. A compression spring according to claim 4, wherein the non-metal layer (43) of the valve element (41a) is made of one of the group selected from plastic material and rubber.

7. A compression spring according to claim 1, wherein the valve element (41a) of the automatic valve (41) is an annular disk which is pre-loaded in the shut-off position.

8. A compression spring according to claim 1, wherein the energy accumulator is a compressed-gas chamber (19).

9. A compression spring according to claim 1, wherein the energy accumulator is a helical spring (46; 64).

10. A compression spring according to claim 1, comprising oil as a pressure fluid.

11. A compression spring according to claim 1, comprising an automatic overflow connection (44) which comprises an overflow channel (38) with a cylindrical pin (69) at least by sections inserted therein so that an overflow connection in the form of an annular channel (70) is provided between the outside wall of the cylindrical pin (69) and the inside wall, contiguous thereto, of the overflow channel (38).

12. A compression spring according to claim 2, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $0 < F_1 < 0.5\ F_2$.

13. A compression spring according to claim 2, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $0 < F_1 < 0.1\ F_2$.

14. A compression spring according to claim 2, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $F_1 = 0$.

15. A compression spring according to claim 3, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $-0.5\ F_2 < F_1 < 0$.

16. A compression spring according to claim 3, wherein the automatic valve (41) is designed such that the force F_1 to F_2 relationship is as follows: $-0.1\ F_2 < F_1 < 0$.